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Two new species of *Bergrothia* Reitter, 1884, with a review of the *Bergrothia* fauna of Georgia (Coleoptera: Staphylinidae: Pselaphinae)

With 8 figures and 2 maps

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Abstract

Two species of *Bergrothia* Reitter, 1884, a small Caucasian genus of Amauropini, are described and illustrated: *B. svanetica* spec. nov. (Georgia: Svaneti region) and *B. simplex* spec. nov. (Northeast Turkey: Ordu, Giresun). Including the new species, the genus now includes a total of nine species distributed in Georgia (six species), Northeast Turkey (three species), and Azerbaijan (one species). Based on abundant material collected during seven field trips conducted to Georgia between 2016 and 2021, the partly allo- and partly sympatric distributions of the *Bergrothia* species in Georgia are clarified and mapped. All of them are confined to the west of the country.

Taxonomic acts

Bergrothia svanetica spec. nov. – urn:lsid:zoobank.org:act:5E249D72-3B06-4153-86E4-8B453413DFE7
Bergrothia simplex spec. nov. – urn:lsid:zoobank.org:act:A4D5E29C-8354-4A5F-A625-28B103AA8740

Key words

Coleoptera, Staphylinidae, Pselaphinae, Amauropini, *Bergrothia*, Caucasus region, Georgia, Turkey, taxonomy, review, new species, new records, distribution maps

Zusammenfassung

Zwei Arten der artenarmen kaukasischen Gattung *Bergrothia* Reitter, 1884, Tribus Amauropini, werden beschrieben und abgebildet: *B. svanetica* spec. nov. (Georgien: Svanetien) und *B. simplex* spec. nov. (Nordost-Türkei: Ordu, Giresun). Einschließlich der neuen Arten enthält die Gattung derzeit insgesamt neun Arten, die in Georgien (sechs Arten), der Nordost-Türkei (drei Arten) und Aserbaidschan (eine Art) verbreitet sind. Auf der Grundlage von umfangreichem Material, das im Rahmen von sieben von 2016 bis 2021 in Georgien durchgeführten Forschungsreisen gesammelt wurde, werden die teils allo- und teils sympatrischen Verbreitungsgebiete der in Georgien vorkommenden Arten geklärt und anhand von Verbreitungskarten illustriert. Die Verbreitung der Gattung in Georgien ist auf den Westen des Landes beschränkt.

Schlüsselwörter

Coleoptera, Staphylinidae, Pselaphinae, Amauropini, *Bergrothia*, Kaukasusregion, Georgien, Türkei, Taxonomie, neue Arten, neue Nachweise, Verbreitungskarten

Introduction

Bergrothia Reitter, 1884 is a small Caucasian genus of the tribe Amauropini Jeannel, 1948. According to Schülke & Smetana (2015), the genus included only six species, three of them confined to Georgia (*B. adzharica* Hlaváč, 2004; *B. lederi* (Saulcy, 1880); *B. mingrelica* (Reitter, 1884)), one to East Azerbaijan (*B. lenkorana* (Reitter, 1884)), one to Northeast Turkey (*B. solodovnikovi* Hlaváč, 2004), and one distributed in Southwest Georgia and the adjacent Turkish province Artvin (*B. saulcyi* (Reitter, 1877)). A seventh species (*B. barbakadzei*) was described from caves in the Imereti region, Georgia, by Maghradze et al. (2019), who also provided a key to all the previously known species. *Bergrothia tibialis* Hlaváč, 1999, a species described from Northeast Turkey, was subsequently synonymised with *B. saulcyi* by Hlaváč (2004).

Numerous field trips conducted to Turkey and Georgia conducted by the authors, Heinrich Meybohm (Großhansdorf), and Michael Schülke (Berlin) in the past two decades yielded abundant material of *Bergrothia*, particularly from Georgia. Aside from previously described species, this material included also two unnamed species which are described in the present study. In addition, the fauna of Georgia is reviewed with a focus on the distributions of the species.

Material and methods

The material treated in this study is deposited in the following collections:

MHNG	Muséum d´Histoire Naturelle Genève (G. Cuccodoro)
MNB	Museum für Naturkunde, Berlin (coll. Schülke)
cAss	Private collection Volker Assing, Hannover
cBra	Private collection Volker Brachat, Geretsried
cHla	Private collection Peter Hlaváč, Prague

The morphological studies were conducted using Stemi SV 6 (Zeiss) and Discovery V12 (Zeiss) microscopes, and a Jenalab compound microscope (Carl Zeiss Jena). The images were created using digital cameras (Axiocam ERc 5s, Nikon Coolpix 995), as well as Labscope and Picolay software. The maps were created using MapCreator 2.0 (primap) software.
Body length was measured from the anterior margin of the labrum to the apex of the abdomen. Other measurements are abbreviated as follows:
HL – head length from the anterior margin of the frons to the posterior constriction of the head; HW – head width across and including eyes; AL – length of antennae; PpL – length of maxillary palpomere IV; PL – length of pronotum; EL – length of elytra along suture; EW – maximal width of both elytra combined.
The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect. Morphological terminology generally follows Chandler (2001).
In samples collected by V. Brachat and H. Meybohm with larger numbers of specimens, the exact count was not always noted down. In such cases "> 5 exs." is given in the material sections.

Results

Descriptions of new species

Bergrothia svanetica spec. nov.

urn:lsid:zoobank.org:act:5E249D72-3B06-4153-86E4-8B453413DFE7
(Figs 1–3, Map 2)

Type material: Holotype ♂: "N42°49'02 E42°01'52 (10) Georgien Svaneti Jvari ca. 20 km N 600 m Brachat & Meybohm 25.6.2017 / *Bergrothia svanetica* spec. nov. ♂ det. Brachat 2022 / Holotypus" (cBra). Paratypes: 1 ♂: same data as holotype (c.Bra); 1 ♂, 1 ♀: "GEORGIA Svaneti (11) ca. 25 km N Jvari; 590 m; N42°51'29"; 42°2'1" 25.IV.2017 leg. Meybohm & Brachat" (cBra); 1 ♂, 6 ♀♀: "GEORGIA Svaneti (25) NW Lentekhi 1240 m; N42°48'21"; E42°40'43" 02.VII.2017 leg. Meybohm & Brachat" (cAss, cBra, cHla, MHNG); 7 ♂♂, 1 ♀: "N42°49'35" E42°54'56" (14) Georgien Kvemo Svaneti Panaga südl. 1250 m Brachat & Meybohm 16.6.2021" (c.Bra, MHNG); 2 ♂♂, 2 ♀♀: "N42°37'54 E42°24'25 (7) GG Samegrelo-Zemo Svaneti Lebarde-Tal 550 m Meybohm & Brachat 14.6.2021" (cAss, cBra); 1 ♂, 2 ♀♀: "N42°38'18 E42°25'27 (8) GG Samegrelo-Zemo Svaneti Lebarde Tal 730 m Meybohm & Brachat 14.6.2021" (cBra); 1 ♂, 4 ♀♀: "GEORGIA [45] - Zemo Svaneti, N Jvari, 42°49'02"N, 42°01'54"E, 600 m, stream valley, 9.VIII.2021, V. Assing" (cBra). 2 ♀♀: same data, but leg. Schülke (MNB); 1 ♂, 3 ♀♀: "GEORGIA [31] - Kvemo Svaneti, NW Lentheki, 42°48'26"N, 42°39'56"E, 1360 m, beach forest, 3.VIII.2021, V. Assing" (cBra); 2 ♀♀: same data, but leg. Schülke (MNB);1 ♀: "GEORGIA [GE2021-44]: Zemo Svaneti, N Jvari, 42°49'58"N 42°01'28"E, 620 m, stream valley with mixed deciduous

forest litter sifted, 9.VIII.2021, leg. M. Schülke" (MNB); 4 ♀♀: "GEORGIA [50] - Zemo Svaneti, WSW Khaishi, 42°56'04"N, 42°09'15"E, 670 m, stream valley, 10.VIII.2021, V. Assing" (cBra); 3 ♂♂, 2 ♀♀: same data, but leg. Schülke (MNB); 3 ♂♂, 7 ♀♀: "GEORGIA [51] - Zemo Svaneti, N Martvili, Lebarde valley, 42°37'54"N, 42°24'28"E, 580 m, 13.VIII.2021, V. Assing" (cBra); 1 ♂, 1 ♀: same data, but leg. Schülke (MNB); 1 ♂: "GEORGIA [51a] - Zemo Svaneti, N Martvili, Lebarde valley, 42°37'54"N, 42°24'28"E, 580 m, 13.VIII.2021, V. Assing" (cBra); 1 ♀: "GEORGIA [51b] - Zemo Svaneti, N Martvili, Lebarde valley, 42°37'54"N, 42°24'28"E, 580 m, 13.VIII.2021, V. Assing" (cBra); 4 ♂♂, 2 ♀♀: "GEORGIA [58] - Zemo Svaneti, N Martvili, Lebarde valley, 42°37'51"N, 42°24'20"E, 540 m, 17.X.2021, V. Assing" (cBra, cHla); 1 ♂, 2 ♀♀: same data, but leg. Schülke (MNB); 1 ♂: "GEORGIA [58a] - Zemo Svaneti, N Martvili, Lebarde valley, 42°37'51"N, 42°24'20"E, 540 m, 17.X.2021, V. Assing" (cBra); 7 ♂♂, 2 ♀♀: "GEORGIA [56] - Zemo Svaneti, N Martvili, Lebarde valley, 42°37'54"N, 42°24'28"E, 580 m, 16.X.2021, V. Assing" (cBra, cHla, MHNG); 2 ♂♂, 2 ♀♀: same data, but leg. Schülke (MNB); 7 ♂♂, 7 ♀♀: "GEORGIA [61] - Zemo Svaneti, N Jvari, 42°49'02"N, 42°01'54"E, 600 m, stream valley, 18.X.2021, V. Assing" (c.Bra); 1 ♂: same data, but leg. Schülke (MNB); 1 ♂: "GEORGIA [61a] - Zemo Svaneti, N Jvari, 42°49'02"N, 42°01'54"E, 600 m, stream valley, 18.X.2021, V. Assing" (cBra); 1 ♂, 1 ♀: "GEORGIA [57] - Zemo Svaneti, N Martvili, Lebarde valley, 42°37'58"N, 42°24'46"E, 580 m, 16.X.2021, V. Assing" (cBra); 4 ♂♂, 4 ♀♀: same data, but leg. Schülke (MNB); 2 ♀♀: "GEORGIA [59] - Zemo Svaneti, N Martvili, Lebarde valley, 42°38'46"N, 42°25'40"E, 840 m, 17.X.2021, V. Assing" (cBra); 1 ♂: "GEORGIA [GE2021-62]: Zemo Svaneti, N Jvari, 42°49'58"N 42°01'28"E, 620 m, stream valley with mixed deciduous forest, litter sifted, 18.X.2021, leg. M. Schülke" (MNB).

Etymology: The specific epithet is an adjective derived from Svaneti, the Georgian region where this species is distributed.

Description: Habitus as in Fig. 1. Body length 2.35–2.50 mm. Body reddish-brown, glossy, with yellowish and depressed pubescence.
Head weakly oblong (HL: 0.52–0.55 mm; HW: 0.45–0.48 mm), dorsally with coarse sculpture; vertex with two lateral keels not reaching posterior margin of head and with a median keel extending from posterior margin of head anteriad beyond foveae of vertex. Eyes reduced, composed of 1–5 often weakly pigmented ommatidia. Eye spine often indistinct or obsolete. Maxillary palpi short, slightly shorter than head (PpL: 0.45 mm). Antennae slender, slightly longer than combined length of head and pronotum (AL: 1.0–1.1 mm); antennomere I 1.3 times as long as broad; antennomere II narrower than I, approximately 1.5 times as long as broad; antennomeres III, IV, and VI slightly narrower than II and as long as broad or weakly oblong; antennomere V as broad as IV, weakly oblong; antennomere VII slightly longer than VI, as broad as long; antennomere VIII as broad as, and slightly shorter than VI; antennomeres IX–XI forming a club, IX as broad as long, X transverse, and XI approximately as long as the combined length of antennomeres VIII–X.
Pronotum with scattered, fine, and partly rugose punctation, nearly as long as head (PL: 0.50 mm, PW: 0.48 mm); with two deep lateral, and one deep median ante-basal foveae; median fovea anteriorly extending into narrow sulcus; between median and lateral ante-basal foveae with a small spine anteriorly extending into a narrow carina reaching middle of pronotum.
Elytra distinctly broader than long and 1.2 times as long as pronotum; with three distinct basal foveae and distinct sutural striae.
Abdomen: tergite IV large, approximately as long as elytra, basally with a transverse and densely pubescent impression extending across two-fifths of tergal width; inner basal keels absent, outer keels directed obliquely postero-laterad; combined length of tergites V–VII shorter than tergite IV.
Legs slender; inner side of metatibiae apically with slender fascicle of setae.
♂: mesotrochanter with pronounced tooth; mesofemur occasionally with a minute tooth near base; inner side of mesotibia shallowly sinuate in apical third, with a small tooth at apical third and apically with a small spine; sternite VIII with shallow median impression; aedeagus (Figs 2–3) 0.38–0.41 mm long, asymmetric, with long and tapering apical portion.

Comparative notes: Regarding the structure of the aedeagus, *B. svanetica* is most similar to *B. lederi* (Saulcy, 1880), which differs from the new species by mesotrochanters with only a minute inner tooth, mesofemora with a distinct spine at basal third, by the presence of two teeth at the proximal end of the mesotibial excavations, and by an aedeagus of different shape both in dorsal and in lateral view. For comparison, new illustrations of the aedeagus of *B. lederi* are provided in Figs 7–8.

Distribution and natural history: The distribution is confined to the Svaneti region, Georgia (Map 2), where the species is rather common. The specimens were collected by sifting leaf litter and dead wood and by soil-washing in moist and shady habitats at altitudes of 550–1250 m.

Bergrothia simplex spec. nov.

urn:lsid:zoobank.org:act:A4D5E29C-8354-4A5F-A625-28B103AA8740

(Figs 4–6)

Type material: Holotype ♂: "TR [22] – Ordu, 15 km S Ordu, S Kabaduz, 990 m, mixed forest, 40°48'59N, 37°54'28E, 30.VII.2006, V. Assing / *Bergrothia simplex*

Figs 1–8: *Bergrothia svanetica* (**1–3**), *B. simplex* (**4–6**), and *B. lederi* (**7–8**). 1, 4 – habitus; 2–3, 5–8 – aedeagus in lateral and in dorsal view. Scale bars: 1, 4: 1.0 mm; 2–3, 5–8: 0.1 mm.

spec. nov. ♂ det. Brachat 2022 / Holotypus" (cBra). Paratypes: 3 ♀♀: same data as holotype (c.Bra); 8 ♂♂, 17 ♀♀: same data as holotype, but leg. Schülke (MNB, cBra); 1 ♂, 4 ♀♀: "TR [16] - Giresun, ca. 30 km S Giresun, 830 m, beech & hazelnut forest, 40°39'01N, 38°27'08E, 28.VII.2006, V. Assing" (cAss, cBra); 3 ♀♀: same data as holotype, but leg. Schülke (MNB).

Etymology: The specific epithet (Latin, adjective: simple) alludes to the weakly modified male meso- and metatibiae.

Description: Habitus as in Fig. 4. Body length 2.05–2.30 mm, reddish-brown, glossy, with yellowish sub-erect pubescence.

Head oblong (HL: 0.50–0.51 mm; HW: 0.42–0.43 mm), dorsally with scattered coarse punctation; vertex with two distinct lateral keels not reaching posterior margin of head, with a median keel extending to posterior margin of head, with a short keel between median and lateral keel on either side, and with a short keel above eyes.

Eyes reduced, composed of 0–4 ommatidia mostly without pigmentation. Eye spine small or indistinct. Maxillary palpi short. Antennae slender, significantly longer than combined length of head and pronotum (AL: 1.05–1.15 mm); antennomeres I 1.5 times as long as broad, II narrower than I and weakly oblong, III, IV, and VI slightly shorter than II, slightly less than 1.5 times as long as broad, V of similar width, but nearly twice as long as broad, VII slightly broader than preceding antennomeres and nearly as long as V, VIII as broad as VII and approximately as long as broad, IX–XI forming a distinct club, IX and X weakly transverse, XI large, as long as combined length of VIII–X, and nearly twice as long as broad.

Pronotum smooth, slightly shorter than head, and nearly as broad as long (PL: 0.45–0.46 mm; PB: 0.42–0.43 mm), with a lateral ante-basal fovea on either side and with a median ante-basal fovea; between median and lateral ante-basal foveae with a small tooth occasionally extending into a small carina; median ante-basal sulcus connected with posterior margin of pronotum by small keel; anterior portion of midline with a keel of variable length.

Elytra 1.2 times as long as pronotum and 1.25 times as broad as long, each with three basal foveae and with distinct sutural striae.

Abdomen: tergite IV large, slightly shorter than elytra, basally with a transverse and densely pubescent fovea extending across more than half of tergal width; inner basal keels absent, lateral keels directed obliquely posterolaterad; combined length of tergites V–VII shorter than tergite IV.

Legs slender; inner side of metatibiae apically with slender fascicle of setae.

♂: protibia shallowly sinuate at apical third; mesofemur with spine at basal fourth; mesotibia shallowly sinuate in apical third, with a distinct apical spine; sternite VIII with shallow median depression; aedeagus asymmetric, 0.44–0.46 mm long and shaped as in Figs 5–6.

Comparative notes: Only two species of *Bergrothia* were previously known from Turkey: B. *saulcyi* (Reitter, 1877) and *B. solodovnikovi* Hlaváč, 2004. The new species is distinguished from both of them particularly by the structure of the aedeagus and weakly modified male meso- and metatibiae. In *B. saulcyi* and *B. solodovnikovi*, the male mesotibiae have a pronounced median spine and the male metatibiae are excavate in the middle. Moreover, in *B. solodovnikovi* the elytra have only two basal foveae. For illustrations of *B. saulcyi* (as *B. tibialis* Hlaváč, 1999) and *B. solodovnikovi* see Hlaváč (1999, 2004).

Distribution and natural history: The distribution is confined to two localities in Ordu and Giresun provinces, North Turkey. The specimens were sifted from leaf litter in a mixed forest with alder, spruce, bramble, and ivy, and in a forest with predominant beech and hazelnut at altitudes of 830 and 990 m.

The *Bergrothia* fauna of Georgia

Bergrothia is now represented in Georgia by six species, all of them distributed in the west of the country, eastwards to East Racha (close to the border with South Ossetia), the Rikoti pass, and the environs of Bakuriani in the Trialeti range. Four of the species, *B. svanetica*, *B. mingrelica*, *B. lederi*, *B. adzharica*) have allopatric distributions (Map 2), whereas the range of *B. saulcyi*, the most widespread species, overlaps with those of two other species (*B. adzharica*, *B. lederi*) and that of *B. barbakadzei* lies within the range of *B. mingrelica* (Maps 1–2).

One of the species, *B. barbakadzei*, has exclusively been found in caves, while the others have been collected by sifting leaf litter and debris, as well as by soil-washing in various moist forest, bush, and shrub habitats at a wide range of altitudes (50–2290 m).

Bergrothia saulcyi (Reitter, 1877)

(Map 1)

Material examined: GEORGIA: Samtskhe-Javakheti: 3 exs., 7 km NW Bakuriani, 41°46'39"N, 43°28'45"E, 1454 m, 13.V.2016, leg. Brachat & Meybohm (cBra); > 5 exs., Samtskhe-Javakheti, N Abastumani, 41°46'23"N, 42°50'12"E, 1370 m, 15.V.2016, leg. Brachat & Meybohm (cBra); 4 exs., Trialeti Range, N Bakuriani, E Tsaghveri, 41°47'25"N, 43°32'27"E, 1150 m, stream valley with mixed forest, litter near stream sifted, 8.VII.2019, leg. Assing (cBra); 4 exs., Trialeti Range, N Bakuriani, E Tsaghveri, 41°47'22"N, 43°32'29"E, 1170 m, mixed forest margin, litter on scree sifted, 8.VII.2019, leg. Schülke (MNB). **Shida Kartli**: 4 exs., 8 km SW Surami, 42°01'33"N,

43°29'43"E, 960 m, 14.V.2016, leg. Brachat & Meybohm (cBra). **Imereti**: > 5 exs., S Sairme, 41°52'47"N, 42°46'02"E, 1420 m, 20.V.2018, leg. Brachat & Meybohm (cBra); 1 ex., Meskheti Range, Zakari pass SE Sairme, 41°50'15"N, 42°49'27"E, 2290 m, moist slope with rhododendron and bushes, litter sifted, 20.VII.2019, leg. Assing (cBra); 5 exs., Meskheti Range, S Bagdati, 42°00'50"N, 42°48'56"E, 270 m, deciduous forest margin with herbs, litter sifted, 21.VII.2019, leg. Assing & Schülke (cBra, MNB); 3 exs., Meskheti Range, N Sairme, 41°58'54"N, 42°47'21"E, 370 m, stream valley with predominant chestnut, alder, and rhododendron, litter sifted, 21.VII.2019, leg. Assing & Schülke (cBra, MNB). **Adjara**: 1 ex., Naghvarevi, 41°43'51"N, 42°13'31"E, 1020 m, 25.V.2018, leg. Brachat & Meybohm (cAss, cBra); 6 exs., Meskheti Range, NE Khulo, 41°41'34"N, 42°21'39"E, 1010 m, stream valley, litter near stream sifted, 12.VII.2019, leg. Assing & Schülke (cBra, MNB); 31 exs., Meskheti Range, NE Khulo, 41°42'17"N, 42°21'49"E, 1120 m, E-slope with predominant *Corylus*, mostly *Corylus* litter sifted, 12.VII.2019, leg. Assing & Schülke (cBra, MNB); 1 ex., Shavsheti Range, SE Khulo, 41°34'52"N, 42°21'54"E, 800 m, stream valley with alder, litter and roots near stream sifted, 12.VII.2019, leg. Assing (cBra); 2 exs., Shavsheti Range, SE Khulo, 41°33'07"N, 42°27'16"E, 1070 m, steep slope with beech forest, partly moist litter and roots sifted, 12.VII.2019, leg. Assing (cBra); 18 exs., Shavsheti Range, SW Khulo, 41°35'04"N, 42°15'08"E, 610 m, mixed forest margin with rhododendron and fern undergrowth, sifted, 13.VII.2019, leg. Assing & Schülke (cBra, MNB); 2 exs., Shavsheti Range, SW Khulo, 41°34'41"N, 42°15'01"E, 1090 m, slope with various trees, bushes, and fern undergrowth, sifted, 13.VII.2019, leg. Assing (cBra); 28 exs., Shavsheti Range, SW Khulo, 41°34'52"N, 42°15'35"E, 700 m, forest margin, litter and roots sifted, 13.VII.2019, leg. Schülke (MNB); 1 ex., Meskheti Range, NNW Khulo, 41°47'19"N, 42°17'25"E, 2010 m, mixed beech and spruce forest, forest margin, beech litter, mushroom, and debris in ditch with Tussilago sifted, 14.VII.2019, leg. Schülke (MNB); 2 exs., Meskheti Range, NW Shuakhevi, Gobroneti, 41°39'18"N, 42°02'41"E, 710 m, stream valley with deciduous trees and bushes, litter near stream sifted, 15.VII.2019, leg. Schülke (MNB); 5 exs., Meskheti Range, NW Shuakhevi, Gobroneti, 41°39'01"N, 42°02'08"E, 430 m, stream valley with deciduous trees and bushes, litter near stream sifted, 15.VII.2019, leg. Assing & Schülke (cBra, MNB); 2 exs., Shavsheti Range, W Shuakhevi, Dandolo, 41°37'36"N, 42°05'58"E, 800 m, stream valley with alder, chestnut and other deciduous trees, litter near stream sifted, 15.VII.2019, leg. Schülke (MNB); 29 exs., Shavsheti Range, SE Batumi, Machakhela National Park, 41°28'55"N, 41°51'29"E, 680 m, stream valley with alder, hazelnut, chestnut, and rhododendron, litter sifted, 16.VII.2019, leg. Assing & Schülke (cBra, MNB); 2 exs., Shavsheti Range, SE Batumi, 41°32'56"N, 41°42'20"E, 50 m, forest margin, soil washing, 16.VII.2019, leg. Assing (cBra); 7 exs., Shavsheti Range, SE Batumi, Machakhela National Park, 41°30'47"N, 41°48'15"E, 160 m, slope with predominant alder, soil washing, 17.VII.2019, leg. Assing (cBra); 7 exs., same data, but sifted, leg. Schülke (MNB); 16 exs., Shavsheti Range, SE Batumi, Machakhela National Park, 41°30'34"N, 41°49'04"E, 170 m, forest margin with ash, walnut, hazelnut, chestnut, and rhododendron, litter sifted, 17.VII.2019, leg. Assing & Schülke (cBra, MNB); 15 exs., same data but soil-washing, leg. Assing (cBra); 34 exs., Shavsheti Range, SE Batumi, Machakhela National Park, 41°28'47"N, 41°51'31"E, 700 m, stream valley with alder and rhododendron, litter sifted, 17.VII.2019, leg. Assing & Schülke (cBra, MNB); 4 exs., same data but soil-washing, leg. Assing (cBra); 13 exs., Shavsheti Range, SE Batumi, Machakhela National Park, 41°28'47"N, 41°51'43"E, 730 m, forest margin with predominant alder and rhododendron, litter sifted, 17.VII.2019, leg. Assing & Schülke (cBra, MNB).

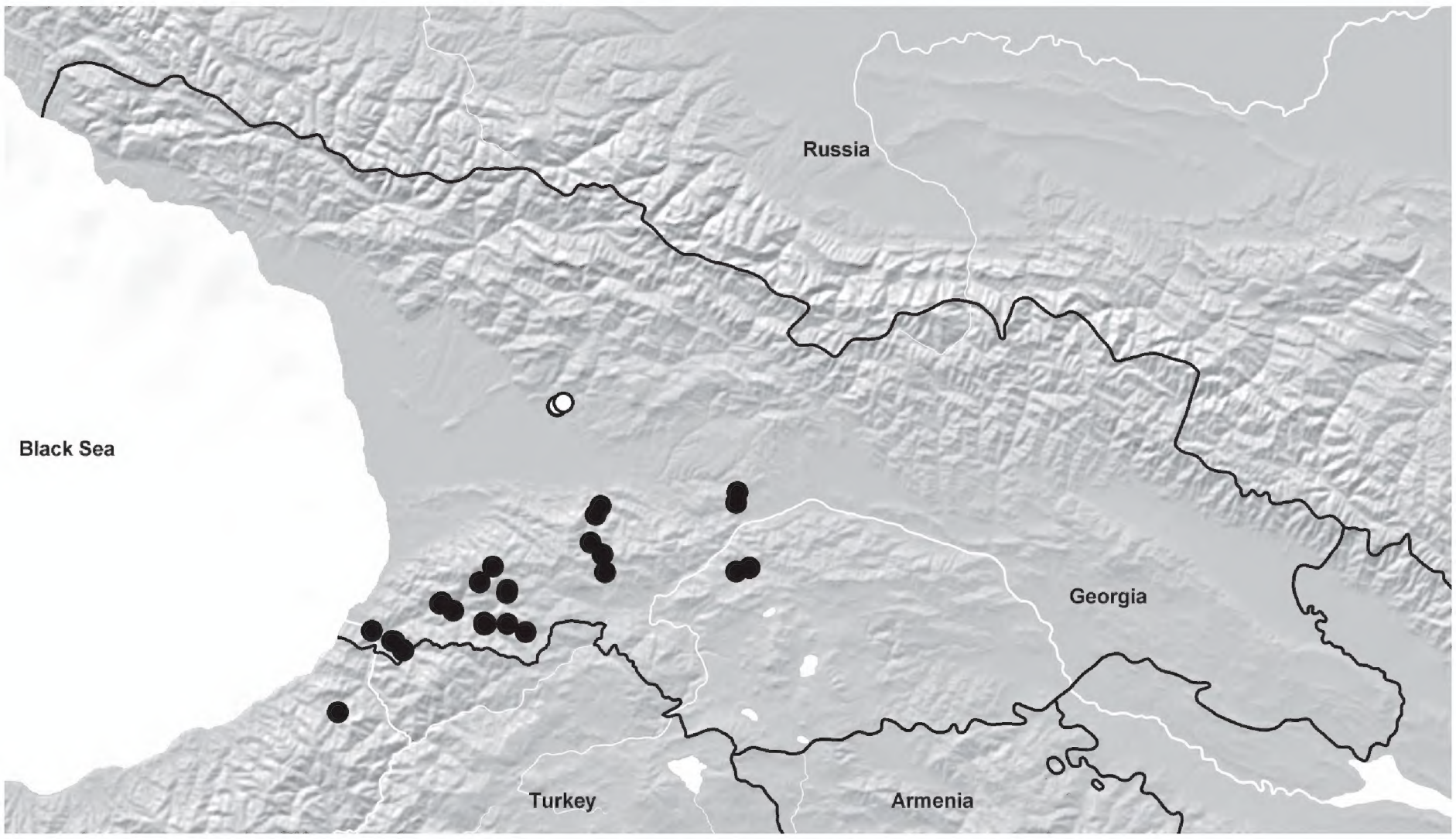
The original description is based on six specimens from the "Suram-Passhöhe" (Reitter 1877), today the Rikoti pass at the border between the Shida Kartli and Imereti regions. Subsequent records (Hlaváč 1999) are based on material without specified localities, except for the type locality of the junior synonym *B. tibialis* in Artvin province, Northeast Turkey. The aedeagus was illustrated by Hlaváč (1999) (as *B. tibialis*).

As can be inferred from the new records listed above, *B. saulcyi* is rather widespread and common in Southwest Georgia, its distribution ranging from Northeast Turkey across the northern slopes of the Shavsheti Range and practically all of the Meskheti Range eastwards to the environs of the Rikoti pass and the Trialeti Range (Map 1). In parts of its range, *B. saulcyi* is sympatric with *B. lederi* and *B. adzharica*.

Bergrothia lederi (Saulcy, 1880)

(Figs 7–8, Map 2)

Material examined: GEORGIA: Imereti: > 5 exs., S Sairme, 41°52'47"N, 42°46'02"E, 1420 m, 20.V.2018, leg. Brachat & Meybohm (cAss, cBra); 1 ex., S Sairme, 41°52'51"N, 42°45'33"E, 1360 m, 20.V.2018, leg. Brachat & Meybohm (cBra); 1 ex., Meskheti Range, N Sairme, 41°57'24"N, 42°46'10"E, 650 m, moist deciduous forest with predominant alder and chestnut, litter sifted, 21.VII.2019, leg. Assing (cBra); 1 ex., same data, but soil-washing (cBra); 1 ex., Meskheti Range, S Bagdati, 42°00'50"N, 42°48'56"E, 270 m, deciduous forest margin with herbs, litter sifted, 21.VII.2019, leg. Assing (cBra); 3 exs., Meskheti Range, S Sairme, 41°52'46"N, 42°46'22"E, 1510 m, stream valley, moist deciduous forest margin, litter and herb roots sifted, 22.VII.2019, leg. Schülke (MNB); 1 ex., NW Surami, Rikoti pass, 42°03'40"N, 43°28'59"E, 930 m, stream valley with chestnut and alder, chestnut litter sifted, 24.X.2021, leg. Schülke (MNB). **Samtskhe-Javakheti**: 7 exs., Trialeti Range, N Bakuriani, E Tsaghveri, 41°47'22"N, 43°32'29"E, 1170 m, mixed



Map 1: Distributions of *Bergrothia sauclyi* (black circles) and *B. barbakadzei* (white circles), based on studied material and on published records with specified localities.

forest margin, litter on scree sifted, 8.VII.2019, leg. Assing & Schülke (cBra, MNB).

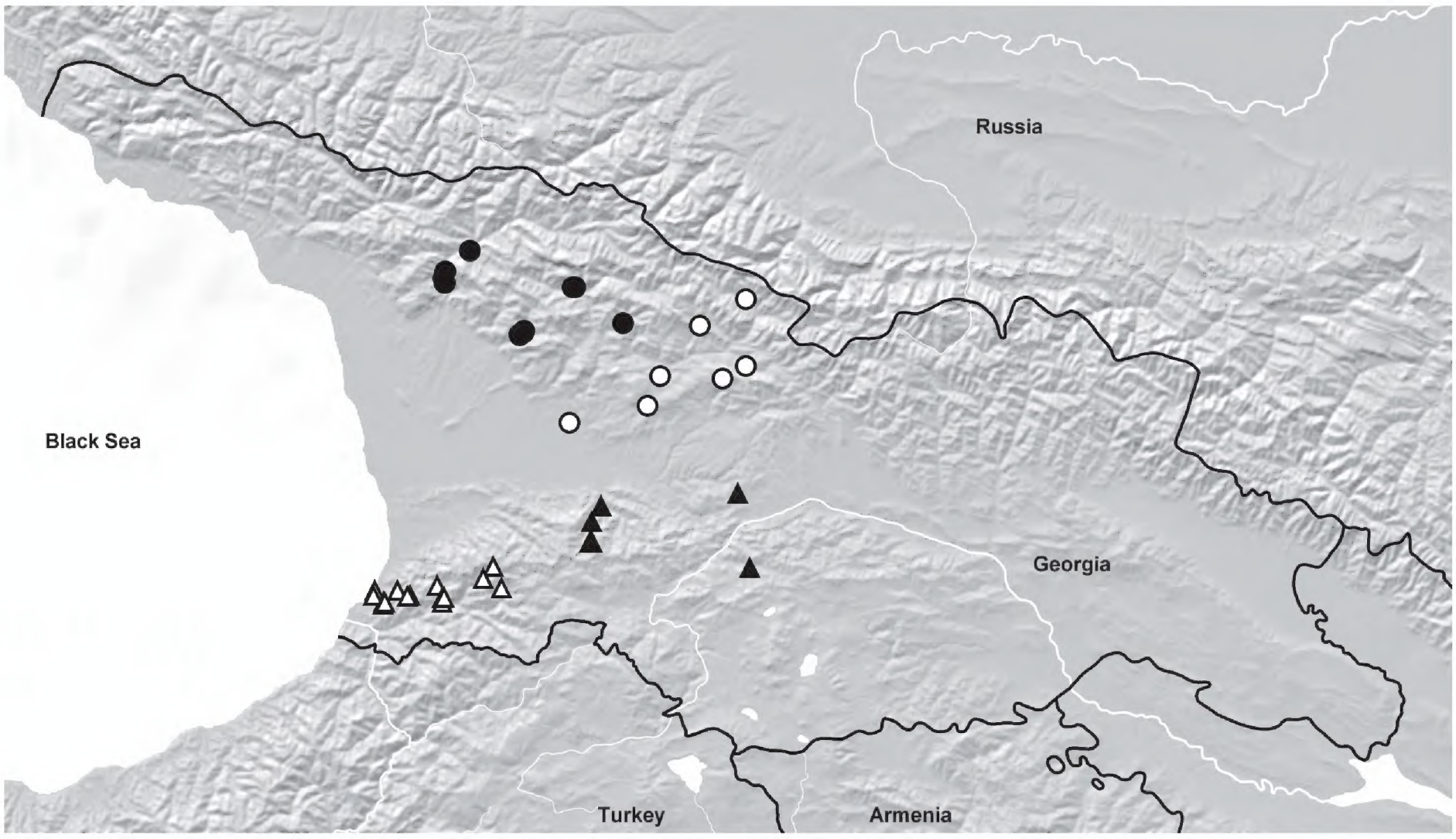
The original description is based on an unspecified number of syntypes collected in "den Wäldern des Suramgebirges" (Saulcy 1880). Subsequent records (Hlaváč 1999) are based on material without specified localities.
Based on the recent records listed above, the distribution ranges from the central Meskheti Range eastwards to the Rikoti pass and to the Trialeti Range, and is situated within that of the significantly more widespread *B. saulcyi*.
For new illustrations of the aedeagus see Figs 7–8.

Bergrothia adzharica Hlaváč, 2004

(Map 2)

Material examined: GEORGIA: Adjara: > 5 exs., 5 km NE Batumi, 41°38'41"N, 41°45'23"E, 320 m, 23.VI.2017, leg. Brachat & Meybohm (cBra); > 5 exs., 7 km NE Batumi, 41°39'12"N, 41°45'36"E, 500–600 m, 24.VI.2017, leg. Brachat & Meybohm (cBra); > 5 exs., W Chakvistavi, 41°41'48"N, 41°49'29"E, 90 m, stream valley with rhododendron, litter sifted, 18.V.2019, leg. Brachat & Meybohm (cBra); 3 exs., E Chakvistavi, 41°40'44"N, 41°53'09"E, deciduous forest, litter sifted, 400 m, 19.V.2019, leg. Brachat & Meybohm (cBra); 3 exs., Meskheti Range, NNW Khulo, 41°47'19"N, 42°17'25"E, 2010 m, mixed beech and spruce forest, forest margin, beech litter, mushroom, and debris in ditch with *Tussilago* sifted, 14.VII.2019, leg. Assing & Schülke (cBra, MNB); 1 ex., Meskheti Range, NW Khulo, 41°42'46"N, 42°19'52"E, 920 m, stream valley with predominant walnut and hazelnut, moist litter near stream sifted, 14.VII.2019, leg. Assing (cBra); 6 exs., Meskheti Range, NW Khulo, 41°44'44"N, 42°14'36"E, 1090 m, stream valley with hazelnut, litter sifted, 14.VII.2019, leg. Schülke (MNB); 6 exs., Meskheti Range, NW Shuakhevi, Gobroneti, 41°39'18"N, 42°02'41"E, 710 m, stream valley with deciduous trees and bushes, litter near stream sifted, 15.VII.2019, leg. Assing & Schülke (cBra, MNB); 70 exs., Meskheti Range, NE Batumi, Mtirala National Park, 41°40'36"N, 41°52'23"E, 300 m, deciduous forest with predominant alder, chestnut, and rhododendron, litter sifted, 18.VII.2019, leg. Assing & Schülke (cBra, MNB); 30 exs., Meskheti Range, NE Batumi, Mtirala National Park, 41°40'35"N, 41°52'29"E, 330 m, moist deciduous forest with predominant alder, chestnut, and rhododendron, litter sifted, 18.VII.2019, leg. Assing & Schülke (cAss, MNB); 5 exs., same data, but soil-washing, leg. Assing (cBra); > 5 exs., 7 km NE Batumi 41°39'05"N, 41°45'51"E, 550 m, sifted, 22.V.2018, leg. Brachat & Meybohm (cAss, cBra); > 5 exs., same data, but soil-washing (cBra); > 5 exs., Gobroneti, 41°40'16"N, 42°02'37"E, 1280 m, 24.V.2018, leg. Brachat & Meybohm (cBra); 3 exs., Gobroneti, 41°40'30"N, 42°03'05"E, 1310 m, 24.V.2018, leg. Brachat & Meybohm (cBra).

The original description is based on a holotype and eight paratypes from two localities to the north and northeast of Batumi and from additional unspecified localities in the environs of Batumi (Hlaváč 2004).



Map 2: Distributions of *Bergrothia svanetica* (black circles), *B. mingrelica* (white circles), *B. adzharica* (white triangles), and *B. lederi* (black triangles), based on studied material and on published records with specified localities.

Based on the recent records listed above, the distribution is confined to the extreme west of the Meskheti Range (region to the west and northwest of Batumi) and much more restricted than that of the geographically close *B. saulcyi* (Map 2).

Bergrothia mingrelica (Reitter, 1884)

(Map 2)

Material examined: GEORGIA: Racha: 4 exs., 4 km NW Nikortsminda, 42°29'10"N, 43°06'06"E, 1395 m, 23.V.2016, leg. Brachat & Meybohm (cBra); 2 exs., Likheti, 42°40'10"N, 43°17'54"E, 1090 m, moist deciduous forest, litter sifted, 17.VI.2021, leg. Brachat & Meybohm (cBra); > 5 exs., Lesora, 42°31'21"N, 43°31'30"E, 1090 m, moist slope with *Petasites*, litter sifted, 19.VI.2021, leg. Brachat & Meybohm (cAss, cBra); 1 ex., Nakerala pass, 42°22'39"N, 43°02'22"E, 1220 m, secondary bushland with rhododendron, 20.VI.2021, leg. Brachat & Meybohm (cBra); 1 ex., N Oni, E Ghebi, 42°45'54"N, 43°31'36"E, 1450 m, moist deciduous forest with predominant old Fagus, soil-washing, 22.X.2021, leg. Assing (cBra); 5 exs., new pass road S Oni, 42°28'31"N, 43°24'31"E, 1810 m, montane forest (*Corylus*, *Acer*) margin, litter sifted, 28.VII.2021, leg. Schülke (MNB). **Imereti**: 1 ex., N Kutaisi, Sataplia Nature Reserve, 42°18'45"N, 42°39'27"E, 330 m, mixed deciduous forest with large rocks, litter sifted, 16.VIII.2021, leg. Schülke (MNB).

The original description is based on an unspecified number of syntypes from "Mingrelien, vom nördlichen Ingur" (Reitter 1884). The sole specimen in the Reitter collection, a syntype erroneously labeled as the holotype, was studied by C. Besuchet and P. Hlaváč (Hlaváč 1999). The locality label "Meskisch Gb." of this specimen is evidently erroneous, too, since it does not agree with the type locality. Subsequent published records are wanting.

The revised distribution ranges from the Sataplia Nature Reserve to the northwest of Kutaisi across the Racha region eastwards to the environs of Ghebi, not far from the border with South Ossetia (Map 2).

Bergrothia barbakadzei Maghradze, Faille, Barjadze & Hlaváč, 2019

(Map 1)

This recently described species is currently known from three caves in the Imereti region, Georgia (Maghradze et al. 2019). Its distribution is illustrated in Map 1.

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